

This listing of claims will replace all prior versions,  
and listings, of claims in the application:

1 Claim 1 (currently amended): A method of providing  
2 search results in response to an ambiguous search query,  
3 the ambiguous search query ~~consisting of~~ including a  
4 sequence of ambiguous information components, the method  
5 comprising:  
6       receiving a sequence of ambiguous information  
7 components from a user;  
8       obtaining mapping information that maps the  
9 ambiguous information components to less ambiguous  
10 information components;  
11       using the mapping information to translate the  
12 sequence of ambiguous information components into at  
13 least two corresponding sequences of less ambiguous  
14 information components;  
15       providing the at least two sequences of less  
16 ambiguous information, each of the sequences effectively  
17 being joined by a logical "OR" operation request, as an  
18 input to a search engine;  
19       obtaining search results from the search engine; and  
20       presenting the search results to the user.

1 Claim 2 (original): The method of claim 1, wherein the  
2 mapping information is based on the configuration of a  
3 standard telephone keypad.

1 Claim 3 (previously presented): The method of claim 1,  
2 wherein the ambiguous information components comprise  
3 numbers and the less ambiguous information components  
4 comprise letters.

1 Claim 4 (original): The method of claim 1, wherein each  
2 of the ambiguous information components comprise a single  
3 press of a key and the less ambiguous information  
4 comprises letters that correspond to the key.

1 Claim 5 (original): The method of claim 1, wherein the  
2 ambiguous information components comprise phonemes.

1 Claim 6 (original): The method of claim 5, wherein the  
2 less ambiguous information components comprise  
3 alphanumeric information.

1 Claim 7 (original): The method of claim 1, wherein the  
2 ambiguous information components comprise visual  
3 information.

1 Claim 8 (original): The method of claim 1, wherein the  
2 act of using comprises using the mapping information in  
3 combination with a lexicon to translate the sequence of  
4 ambiguous information components into one or more  
5 corresponding sequences of less ambiguous information  
6 components.

1 Claim 9 (original): The method of claim 8, wherein the  
2 lexicon is a dictionary.

1 Claim 10 (previously presented): The method of claim 8,  
2 wherein the lexicon is a list of sequences of less  
3 ambiguous information components that previously have  
4 been processed by the search engine as search queries.

Claim 11 (canceled)

1 Claim 12 (previously presented): The method of claim 1,  
2 wherein the act of providing comprises:  
3       determining a subset of the translated sequences of  
4 less ambiguous information components; and  
5       providing the subset of translated sequences of less  
6 ambiguous information components as an input to a search  
7 engine.

1 Claim 13 (original): The method of claim 12, wherein the  
2 act of determining comprises comparing the translated  
3 sequences of less ambiguous information components  
4 against a lexicon.

1 Claim 14 (currently amended): A method of providing  
2 search results in response to an ambiguous search query,  
3 the ambiguous search query ~~consisting of~~ including a  
4 sequence of ambiguous information components, the method  
5 comprising:  
6       receiving a sequence of ambiguous information  
7 components from a user;  
8       obtaining mapping information that maps the  
9 ambiguous information components to less ambiguous  
10 information components;  
11       using the mapping information to translate the  
12 sequence of ambiguous information components into a  
13 plurality of corresponding sequences of less ambiguous  
14 information components;  
15       determining a subset of the plurality of sequences  
16 of less ambiguous information components by comparing the  
17 plurality of sequences of less ambiguous information

18 components with terms used in past search queries stored  
19 in a search query log;  
20 providing the subset of sequences of less ambiguous  
21 information components as an input to a search engine;  
22 obtaining search results from the search engine; and  
23 presenting the search results to the user.

1 Claim 15 (original): The method of claim 12, wherein the  
2 act of determining comprises using statistical  
3 information about the co-occurrence of the less ambiguous  
4 information components within the sequence.

1 Claim 16 (currently amended): A method of providing  
2 search results in response to an ambiguous search query,  
3 comprising:  
4 receiving a sequence of information components from  
5 a user, each information component corresponding to a key  
6 press;  
7 obtaining mapping information that maps each of the  
8 key press information components to a plurality of other  
9 information components, each corresponding to the same  
10 key press;  
11 using the mapping information to determine, from the  
12 sequence of key press information components, other  
13 sequences of information components by converting each  
14 key press information component to each of the other  
15 information components that correspond to the key press  
16 component;  
17 providing one or more of the received sequence and  
18 the other sequences as a search query input to a search  
19 engine;  
20 obtaining search results from the search engine; and

21           presenting the search results to the user,  
22           wherein the search results include references to Web  
23           page documents.

1   Claim 17 (original): The method of claim 16, wherein the  
2   mapping information is based on the configuration of a  
3   standard telephone keypad.

1   Claim 18 (original): The method of claim 17, wherein the  
2   received information components comprise numbers and the  
3   other information components comprise letters.

1   Claim 19 (original): The method of claim 17, wherein  
2   both the received and other information components  
3   comprise letters.

1   Claim 20 (original): The method of claim 16, wherein the  
2   act of providing comprises providing at least two  
3   sequences to the search engine using a logical "OR"  
4   operations.

Claims 21-25 (canceled)

1   Claim 26 (currently amended): A method of providing  
2   search results to a user in response to an ambiguous  
3   search query, comprising:  
4       receiving at least two number words constituting a  
5   number phrase;  
6       translating each number word into one or more letter  
7   words, based on mapping information, to generate a  
8   plurality of letter phrases, each of the letter phrases  
9   corresponding to the number phrase;

10       forming a search query to a search engine wherein  
11       the search query includes at least one of the letter  
12       phrases;  
13       obtaining search results from the search engine in  
14       response to the search query; and  
15       providing the search results to a user,  
16       wherein the search results include references to Web  
17       page documents.

1   Claim 27 (previously presented): The method of claim 26,  
2   wherein the providing step comprises providing at least  
3   two of the letter phrases, each of the letter phrases  
4   being effectively joined by a logical "OR" operation  
5   request, as a search query to a search engine

1   Claim 28 (original): The method of claim 26, wherein the  
2   mapping information is based on a standard telephone  
3   keypad.

Claim 29 (canceled)

1   Claim 30 (currently amended): A computer-readable medium  
2   containing one or more instructions for providing search  
3   results in response to an ambiguous search query, the  
4   ambiguous search query ~~consisting of~~ including a sequence  
5   of ambiguous information components, the instructions  
6   comprising:  
7       receiving a sequence of ambiguous information  
8       components from a user;  
9       obtaining mapping information that maps the  
10      ambiguous information components to less ambiguous  
11      information components;

12       using the mapping information to translate the  
13       sequence of ambiguous information components into at  
14       least two corresponding sequences of less ambiguous  
15       information components;  
16       providing the at least two sequences of less  
17       ambiguous information, each of the sequences effectively  
18       being joined by a logical "OR" operation request, as an  
19       input to a search engine;  
20       obtaining search results from the search engine; and  
21       presenting the search results to the user.

1   Claim 31 (currently amended): An apparatus for providing  
2   search results in response to an ambiguous search query,  
3   the ambiguous search query ~~consisting of~~ including a  
4   sequence of ambiguous information components, comprising:  
5       at least one memory having program instructions; and  
6       at least one processor configured to execute the  
7   program instructions to perform the operations of:  
8       receiving a sequence of ambiguous information  
9   components from a user;  
10       obtaining mapping information that maps the  
11   ambiguous information components to less ambiguous  
12   information components;  
13       using the mapping information to translate the  
14   sequence of ambiguous information components into at  
15   least two corresponding sequences of less ambiguous  
16   information components;  
17       providing the at least two sequences of less  
18   ambiguous information, each of the sequences effectively  
19   being joined by a logical "OR" operation request, as an  
20   input to a search engine;

21                   obtaining search results from the search  
22 engine; and  
23                   presenting the search results to the user.

1 Claim 32 (currently amended): An apparatus for providing  
2 search results in response to an ambiguous search query,  
3 the ambiguous search query ~~consisting of~~ including a  
4 sequence of ambiguous information components, comprising:  
5       means for receiving a sequence of ambiguous  
6 information components from a user;  
7       means for obtaining mapping information that maps  
8 the ambiguous information components to less ambiguous  
9 information components;  
10      means for using the mapping information to translate  
11 the sequence of ambiguous information components into at  
12 least two corresponding sequences of less ambiguous  
13 information components;  
14      means for providing the at least two sequences of  
15 less ambiguous information, each of the sequences  
16 effectively being joined by a logical "OR" operation  
17 request, as an input to a search engine;  
18      means for obtaining search results from the search  
19 engine; and  
20      means for presenting the search results to the user.

1 Claim 33 (previously presented): The method of claim 1  
2 wherein the act of using the mapping information to  
3 translate the sequence of ambiguous information  
4 components into one or more corresponding sequences of  
5 less ambiguous information components uses the mapping  
6 information to directly translate the sequence of  
7 ambiguous information components into one or more



8 corresponding sequences of less ambiguous information  
9 components.

1 Claim 34 (previously presented): The method of claim 1  
2 wherein the ambiguous information components are more  
3 ambiguous than the less ambiguous information components  
4 due to a limited capability of a user input device.

1 Claim 35 (previously presented): The method of claim 1  
2 further comprising looking up search results using an  
3 index including entries, at least one entry including a  
4 sequence of less ambiguous information components mapped  
5 to a set of one or more items.

1 Claim 36 (currently amended): The method of claim 26  
2 wherein the search results provided to the user have been  
3 ranked such that search results corresponding to  
4 documents that include an exact match of at least one of  
5 the ~~exact~~ letter phrases are provided higher than search  
6 results corresponding to documents that do not include an  
7 exact match of any of the ~~exact~~ letter phrases.

1 Claim 37 (currently amended): The method of claim 26  
2 wherein the search results exclude search results  
3 corresponding to documents that ~~include~~ do not include an  
4 exact match of any of the ~~exact~~ letter phrases.

1 Claim 38 (currently amended): A method of providing  
2 search results in response to an ambiguous search query,  
3 the ambiguous search query ~~consisting of~~ including a  
4 sequence of ambiguous information components, the method  
5 comprising:

6           receiving a sequence of ambiguous information  
7 components from a user associated with a language;  
8           obtaining mapping information that maps the  
9 ambiguous information components to less ambiguous  
10 information components;  
11          using the mapping information to translate the  
12 sequence of ambiguous information components into one or  
13 more corresponding sequences of less ambiguous  
14 information components;  
15          providing one or more of the sequences of less  
16 ambiguous information as an input to a search engine;  
17          obtaining search results from the search engine;  
18          reordering the obtained search results using the  
19 language of the user; and  
20          presenting the reordered search results to the user,  
21          wherein the search results include references to Web  
22 page documents.